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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,730	05/16/2001	Eitan Yehuda	YEHUDA 2	9038

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EXAMINER	
TON, ANTHONY T	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/855,730	YEHUDA ET AL.	
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7 and 9-13* is/are rejected.

7)☒ Claim(s) *6,8,14 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 May 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ ~~Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)~~ Paper No(s)/Mail Date *08/06/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. **The drawings** are objected to because the following informalities:

Figures 1, 2 and 3: All of characters "**VC4A**" in row 7th of the second node 14 are improper since the data stream "VC4D" is received by the delay equalization means 26; therefore, this data stream "VC4D" should be outputted at the row 7th of the delay means 26 and the cross-connection 28 in the second node 14.

Examiner suggests changing the character "**VC4A**" to "**VC4D**".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

a) Term "Let the optic link **allows**" in page 3 line 20 is improper.

Examiner suggests changing this term to "Let the optic link **allow**".

b) Signal "signal **VC4-4c**" in page 17 line 10 is improper since according to **Fig.1**, this signal should be "signal **VC4A-4C**".

Examiner suggests changing this signal to "signal **VC4A-4C**".

c) Term "the **first** node" in page 18 line 26 is improper since according to **Fig.2**, the control unit 13 is located inside "the second node".

Examiner suggests changing this term to "the **second** node".

d) Reference numeral "**47**" in page 24 **line 1** and **line 6** (two places) is improper since according to **Fig.5**, this reference number should be "43"

Examiner suggests changing this reference number to "**43**".

Appropriate correction is required.

Claim Objections

3. **Claims 1, 2, 5, 6, 8-10, 14 and 15** are objected to because of the following informalities:

Term "**copy**" in claim 1 lines 5 and 7; in claim 2 lines 9, 11, 15 and 16 (note: two places in line 16); in claim 5 line 3; in claim 6 lines 5 and 7; in claim 8 lines 3 and 4; in claim 9 lines 7 and 10; in claim 10 lines 5 and 6; in claim 14 lines 2 and 4; and in claim 15 lines 11 and 15, is improper since an original data stream is copied to a copied data stream.

Therefore, Examiner suggests changing this term to "**copied**".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claim 1** is rejected under 35 U.S.C. 102(e) as being anticipated by *Park et al.* (US Patent No. 5,987,027) hereinafter referred to as *Park.*

In Regarding to Claim 1: *Park* disclosed a method of errorless switching, in a telecommunication network, from a basic data stream to a copy of the basic data stream obtained by bridging of the basic data stream at a first network node *(see Fig.1: input switching modules; and col.12 lines 22-24),* the method being characterized in that the switching is performed at a second network node receiving both the basic data stream and the copy data stream *(see Fig.1: output switching modules; and col.12 lines 25-37)*, upon performing an operation of delay equalization between the basic data stream and the copy data stream *(see col.2 lines 13-29: some further constraints exist regarding the timing two streams must be synchronized to allow merging to occur properly (hence, delay equalization)).*

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 5, 9 and 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Park et al.* (US Patent No. 5,987,027) in view of *Chang et al.* (US Patent No. 6,233,075) hereinafter referred to as *Chang.*

a) **In Regarding to Claim 9**: *Park* disclosed a system for errorless switching, in a telecommunication network *(see Fig.1),* from a basic data stream to a copy of the basic data stream obtained by bridging of the basic data stream *(see Fig.1: input switching modules; and col.12 lines 22-24)*;

the system comprises a first network node interconnected with a second network node via a telecommunication path *(see Fig.1: link 24)*;

said first node being capable of bridging said basic data stream, said second network being intended for receiving both the basic data stream and the copy data stream *(see Fig.1: output switching modules; and col.12 lines 25-37)*; and

the system also comprising a network management block and a delay equalizing means operative to perform delay equalization between the basic data stream and the copy data stream before dropping the basic data stream *(see Fig.1: middle stage modules; col.2 lines 13-29: some further constraints exist regarding the timing two streams must be synchronized to allow merging to occur properly (hence, delay equalization); and col.4 lines 36-44).*

Park failed to explicitly disclose the system comprising a network management.

Chang explicitly disclosed such a network management *(see Fig.5: block 520 NC & M).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a network management, as taught by *Chang* with *Park*, so that a connection table can be constantly updated by continuous communication between a network management and network elements through logical connections. The motivation for doing so would have been to provide a label switching that enables highly efficient routing and throughput, and reduces the number of IP-level hops required by keeping packets routing at an optical level to one hop as managed by the network management which creates and maintains routing information *(see Chang: col.9 lines 49-54)*. Therefore, it would have been obvious to combine *Chang* with *Park* in the invention as specified in the claim.

b) **In Regarding to Claim 11**: *Park* further disclosed designed for SDH/SONET data streams *(see col.1 lines 17-22)*.

c) **In Regarding to Claim 12**: *Park* further disclosed the telecommunication path comprises one or more transmission lines *(see Fig.1: links 24)*.

d) **In Regarding to Claims 5 and 13**: *Park* disclosed all aspects of these claims as set forth in claims 1 and 9, respectively; and *Park* further disclosed the first node includes a Network Element comprising:

a first cross-connect device having an input stage and an output stage *(see Fig.1: 26 and 24, n1 x m; and col.3 lines 10-18);*

the second node includes a Network Element, comprising a second cross-connect device having an input stage and an output stage *(see Fig.1: n1 x m2; and col.3 lines 10-18)*; and

the first node is provided with a MUX unit connected at its input stage to the output stage of the first cross-connect, and the second node is provided with a DEMUX unit *(see col.1 lines*

35-37: the signal is de-multiplexed; and col.2 lines 30-35: an SDH signal is basically time division multiplexing at byte level);

Park failed to explicitly disclose the output stage of the MUX unit is connected to the input stage of the DEMUX unit via the telecommunication path, and the second node being also provided with the delay equalizing means connected between the output stage of the DEMUX unit and the input stage of the second cross-connect; and

each of the first and second nodes comprising a control unit.

Chang explicitly disclosed such an output stage of the MUX unit is connected to the input stage of the DEMUX unit via the telecommunication path, and the second node being also provided with the delay equalizing means connected between the output stage of the DEMUX unit and the input stage of the second cross-connect *(see Fig.11: MUX IN (DEMUX) and MUX OUT (MUX)).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such an output stage of the MUX unit is connected to the input stage of the DEMUX unit via the telecommunication path, and the second node being also provided with the delay equalizing means connected between the output stage of the DEMUX unit and the input stage of the second cross-connect, as taught by *Chang* with *Park*, so that a connection table can be constantly updated by continuous communication between a network management and network elements through logical connections. The motivation for doing so would have been to provide de-multiplexed and multiplexed signals to appropriate optical links *(see Chang: col.18 lines 5-9).* Therefore, it would have been obvious to combine *Chang* with *Park* in the invention as specified in the claims.

Chang also explicitly disclosed such each of the first and second nodes comprising a control unit *(see Figs. 10 and 12: 1080 and 1280).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a network management, as taught by *Chang* with *Park*, so that a connection table can be constantly updated by continuous communication between a network management and network elements through logical connections. The motivation for doing so would have been to control the operation of a transmitter and a switch as coordinated with SPRING devices *(see Chang: col.17 lines 44-47).* Therefore, it would have been obvious to combine *Chang* with *Park* in the invention as specified in the claims.

8. **Claims 2-4, 7 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Park et al.* (US Patent No. 5,987,027) in view of *Chang et al.* (US Patent No. 6,233,075) as applied to claims 9 and 11-13 above, and further in view of *Yoshida et al.* (US Patent No. 6,034,974) hereinafter referred to as *Yoshida.*

a) **In Regarding to Claims 2 and 10**: *Park* disclosed all aspects of these claims as set forth in claims 1 and 9, respectively.

Park failed to explicitly disclose designed for on-line rearrangement of an original data stream being composed of basic fragments transmitted in respective original time-slots while one or more vacant data slots exist in the original data stream, and

wherein said basic data stream constitutes one of said basic fragments, and said copy data stream constitutes a copy fragment occupying one of said vacant time slots and obtained by bridging said basic fragment.

Yoshida explicitly disclosed said basic fragments transmitted in respective original time-slots while one or more vacant data slots exist in the original data stream *(see Fig.34: UNEQ; and col.1 line 63-67:empty time slot).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine said basic fragments transmitted in respective original time-slots while one or more vacant data slots exist in the original data stream, as taught by *Yoshida* with *Park*, so that STM-n frame signals can be obtained by line signals VC-n. The motivation for doing so would have been to provide connection setting for VC-n signals can be freely changed by the alternation of a setup to improve the reliability of active and redundant lines *(see Yoshida: col.1 lines 52-54; and col.2 lines 1-4).* Therefore, it would have been obvious to combine *Yoshida* with *Park* in the invention as specified in the claims.

Chang explicitly disclosed said basic data stream constitutes one of said basic fragments, and said copy data stream constitutes a copy fragment occupying one of said vacant time slots and obtained by bridging said basic fragment *(see abstract: generating replicated versions of the input data payload at input node, and transmission of each of the replicated versions over a corresponding one of the plurality of links; and see Fig.3B).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine said basic data stream constitutes one of said basic fragments, and said copy data stream constitutes a copy fragment occupying one of said vacant time slots and obtained by bridging said basic fragment, as taught by *Chang* with *Park*, so that a connection table can be constantly updated by continuous communication between a network management and network elements through logical connections. The motivation for doing so would have been to provide three

disjoint paths are sufficient to obtain all data information at a receiver side *(see Chang: col.9 lines 34-35).* Therefore, it would have been obvious to combine *Chang* with *Park* in the invention as specified in the claims.

b) **In Regarding to Claim 3**: *Park* further disclosed for rearrangement SDH/SONET data streams *(see col.1 lines 17-22).*

c) **In Regarding to Claim 4**: *Park* further disclosed the telecommunication path comprises one or more transmission lines *(see Fig.1: links 24).*

d) **In Regarding to Claim 7**: *Park* further disclosed the method further comprising a step of freeing one or more of the original time slots at the first node, for transmitting there-through one or more new signals *(see col.3 lines 36-48: available path, a group of consecutive switching slots that can pass the connection from the requested inputs on the switch to the requested outputs).*

Allowable Subject Matter

9. **Claims 6, 8, 14 and 15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Examiner Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ken Vanderpuye** can be reached on **571-272-3078**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by :
Anthony T. Ton
Patent Examiner
November 10, 2004

PHIRIN SAM
PRIMARY EXAMINER